CAIT
Center for Advanced Infrastructure & Transportation
Rutgers, The State University of New Jersey

QUARTERLY PROGRESS REPORT

Project Title:	Instrumentation and Monitoring of Bridge Approach Slabs – Phase II
RFP NUMBER: N/A	NJDOT RESEARCH PROJECT MANAGER: Robert Sauber and Nick Vittilo
TASK ORDER NUMBER/Study Number:	PRINCIPAL INVESTIGATOR: Hani Nassif
Period Starting: 1/1/2001 - 12/31/2004 (Start-End Date of Study)	Period Ending: 4th Quarter 2003 Report dated 11/30/03

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Instrumentation Plan and Field testing	30%	20%	90%	27%
Calibration of Sensors and DAS	20%	30%	60%	12%
Data Collection and LTRM	20%	10%	50%	10%
FEM Verification	10%	2%	8%	8%
Progress Reports & Technical Memorandum	15%	10%	60%	9%
Final Report	5%	0%	0%	0%
TOTAL	100%			66%

1. Progress this quarter by task:

- Installed VWSG and fiber optic sensors in approach slabs in Lanes 1 and 2 near the South Abutment.
  - With help from the Rutgers team, few Fiber optic sensors were installed by UIC Team for one slab in Lane 2. The remaining fiber optic sensors were installed by Rutgers University Team in the Slab located in Lane 1. All VWSG are working but the fiber optic sensors are not.
  - Contractor damaged a number of the fiber optic sensors during the concreting of the slab. Photos will be presented during the Quarterly Report meeting.
- Collected concrete samples to determine material properties
- Visual inspection of cracks was performed and no cracks were detected
- Ran sensors cables underneath the approach slab to the data logger such that the strain in the concrete can be monitor during concreting.
- Contractor installed temporary power to the data logger on South Abutment
- Contractor installed telephone line from Pier 2 location to the data logger at the South Abutment
- Noted a lack of quality control during the construction and preparation of the approach slabs. The Rutgers Team communicated their concerns on various occasions to the Contractor and NJDOT on-site quality control representatives and project management. The main concerns were with the wrong reinforcement spacings, cover, geometry, and installation of WIM system. Only on few occasions were the faulty work corrected. Photos of various observations will be presented during the Quarterly report meeting.
- Contractor opened lane 2 to traffic prior to initial static testing can be performed on the slabs. Static tests are planned for December 1, 2003. Calibration of the WIM bending plate system is scheduled for December 10, 2003.

2. Proposed activities for next quarter by task

- Remodel FE model for the embedded beam to reflect the error made by the contractor.

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- Static testing of the approach slab and calibrating the model using the new 3D model.
- Comparing results from fiber optic sensors with VWSG.

3. List of deliverables provided in this quarter by task (product date)
   N/A
4. Progress on Implementation and Training Activities
   N/A
5. Problems/Proposed Solutions
   N/A
6. Budget Summary*

Total Project Budget (# of years)	1 Year ADD-ON	$736,466
Total Project Expenditure to date		$537,414
% of Total Project Budget Expended		73%
Task Order Number/Study Number:		99 / 4-26676
Current Task Order Budget (# of years)	Year 1 ADD-ON	$736,466
Actual Expenditure to date against current task order		$537,414
% of current task order budget expended		73%

* These are approximate expended amounts for the project; these estimates are for reference only and should not be used for official accounting purposes. For a more accurate project accounting please review the quarterly invoice for this project.